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(54) Title: CHIMAERIC PLANT VIRUSES WITH MUCIN PEPTIDES

(a)

Sequence of SBMV Coat Protein Spanning The Potential Insertion Site With Introduced Base  
Changes and New Restriction Sites: (sequence starts at nt 3955)

M E G G S S K T A V N T G  
 ATGGAAGGAGGATCATCTAAGACTGCTGTGAACACTGGG  
 ↓ ↓  
 GGATCC GTTAAC  
 BamHI HpaI

(b)

Series of Sequences to be Inserted Between the Restriction Sites to Insert the MUC1(16)  
Epitope at Various Locations

G V T S A P D T R P A P G S T A  
 GGTGTTACTTCTGCTCCTGATACTAGACCTGCTCCTGGTTCTACTGCT  
 CCACAATGAAGACGACCACTATGATCTGGACGAGGACCAAGATGACGA

GATCC G	TCTAAGACTGCTGTT AGATTCTGACGACAA
GATCCTCT GAGA	AAGACTGCTGTT TTCTGACGACAA
GATCCTCTAAG GAGATTC	ACTGCTGTT TGACGACAA
GATCCTCTAAGACT GAGATTCCTGA	GCTGTT CGACAA
GATCCTCTAAGACTGCT GAGATTCCTGACGA	GTT CAA

(57) Abstract: Mucin peptide epitopes are inserted into  
the coat protein of a plant virus (e.g. a comovirus such as  
CPMV) having a beta-barrel structure at an immunogeni-  
cally effective site, such as in a loop connecting beta sheets  
or at/near the C-terminus. The resulting chimaeric virus  
particles are extremely immunogenic, giving better results  
than KLH conjugation and not requiring the addition  
of exogenous adjuvant. They are effective at mucosal  
surfaces, particularly when administered intranasally.

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